

**Abstract****Optical Component With Signal Amplification**

- 5 An optical component comprising a plurality of optical  
input ports and a plurality of optical output ports. A  
polymer amplifying medium is provided within the  
component which is pumped by a pump source for exciting  
the polymer amplifying medium. Signals passing through  
10 the optical component are routed through the polymer  
amplifying medium. This provides amplification using a  
polymer amplifying medium which is integrated into the  
structure of the component. This amplification can then  
compensate for the loss resulting from the other  
15 functions of the component.

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